State of New Jersey

CHRIS CHRISTIE
*Governor*

KIM GUADAGNO
*Lt. Governor*

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Mail Code – 401-02B
Water Pollution Management Element
Bureau of Surface Water Permitting
P.O. Box 420 – 401 E State St
Trenton, NJ 08625-0420
Phone: (609) 292-4860 / Fax: (609) 984-7938

BOB MARTIN
*Commissioner*

**CERTIFIED MAIL**
RETURN RECEIPT REQUESTED
XXXX XXXX XXXX XXXX XXXX
Date

Robert G. Cornforth
Director of Operations
Camden County MUA
1645 Ferry Avenue
Camden, NJ 08104

Re: Draft Surface Water Revoke & Reissue Permit Action
Category: A -Sanitary Wastewater
CSM -Combined Sewer Management
NJPDES Permit No. NJ0026182
DELAWARE #1 WATER POLLUTION CONTROL FACILITY
Camden City, Camden County

Dear Mr. Cornforth:

Enclosed is a **draft** New Jersey Pollutant Discharge Elimination System (NJPDES) permit action identified above which has been issued in accordance with N.J.A.C. 7:14A. The renewal permit issued on October 23, 2011 and effective January 1, 2012 is being revoked and reissued in order to incorporate conditions for Combined Sewer Management (CSO) into the permit.

Notice of this draft permit action will appear in the *Courier Post* and in the April 17, 2013 *DEP Bulletin*. The *DEP Bulletin* is available on the internet at http://www.state.nj.us/dep/bulletin. In accordance with N.J.A.C. 7:14A-15.10(c)1i, the public comment period will close thirty days after its appearance in the newspaper.

As detailed in the *DEP Bulletin* and aforementioned newspaper, written comments or a request that the Department hold a non-adversarial public hearing on the draft document, must be submitted in writing to Pilar Patterson, Chief, Mail Code 401-02B, Division of Water Quality, Bureau of Surface Water Permitting, P.O. Box 420, Trenton, NJ 08625-0420 by the close of the public comment period. All persons, including the applicant, who believe that any condition of this draft document is inappropriate or that the Department's tentative decision to issue this draft document is inappropriate, must raise all reasonable arguments and factual grounds supporting their position, including all supporting materials, during the public comment period.

The Department will respond to all significant and timely comments upon issuance of the final document. The permittee and each person who has submitted written comments will receive notice of the Department's final decision to issue, revoke, or redraft the document.

If you have questions or comments regarding the draft action, please contact Robert Hall at (609) 292-4860.

Sincerely,

Pilar Patterson
Bureau Chief
Bureau of Surface Water Permitting

Enclosures

c: Permit Distribution List

Masterfile #: 14667; PI #: 46168

# NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM

The New Jersey Department of Environmental Protection hereby grants you a NJPDES permit for the facility/activity named in this document. This permit is the regulatory mechanism used by the Department to help ensure your discharge will not harm the environment. By complying with the terms and conditions specified, you are assuming an important role in protecting New Jersey's valuable water resources. Your acceptance of this permit is an agreement to conform with all of its provisions when constructing, installing, modifying, or operating any facility for the collection, treatment, or discharge of pollutants to waters of the state. If you have any questions about this document, please feel free to contact the Department representative listed in the permit cover letter. Your cooperation in helping us protect and safeguard our state's environment is appreciated.

**Permit Number: NJ0026182**

**Draft: Surface Water Revoke & Reissue Permit Action**

**Permittee:**

Camden County MUA
1645 Ferry Avenue
Camden, NJ 08104

**Co-Permittee:**

**Property Owner:**

Camden County MUA
1645 Ferry Avenue
Camden, NJ 08104

**Location Of Activity:**

Delaware #1 Water Pollution Control Facility
2nd & Jackson Streets
Camden, Camden County

| Authorization(s) Covered Under This Approval | Issuance Date | Effective Date | Expiration Date |
|---|---|---|---|
| A -Sanitary Wastewater<br>CSM -Combined Sewer Management | Pending | Pending | Pending |

**By Authority of:**
**Commissioner's Office**

**DEP AUTHORIZATION**
**Pilar Patterson, Chief**
**Bureau of Surface Water Permitting**
**Division of Water Quality**

(Terms, conditions and provisions attached hereto)

| MONITORED LOCATION: | RECEIVING STREAM: | STREAM CLASSIFICATION: | DISCHARGE CATEGORY(IES): |
|---|---|---|---|
| 040A CSO | Delaware River | Mainstem Delaware-Zone 3 | A - Sanitary Wastewater |

**Location Description**

32nd & Farragut Street
Latitude N: 39d 57m 54s
Longitude W: 75d 05m 28s

**Contributing Waste Types**

Sanitary, Storm Water Runoff

**Surface Water DMR Reporting Requirements:**

Submit a Monthly DMR: within twenty-five days after the end of every month beginning from the effective date of the permit (EDP).

**Table III - B - 1: Surface Water DMR Limits and Monitoring Requirements**

**PHASE:** Final **PHASE Start Date:** **PHASE End Date:**

| Parameter | Sample Point | Limit | Limit | Units | Limit | Limit | Limit | Units | Frequency | Sample Type |
|---|---|---|---|---|---|---|---|---|---|---|
| Solids/Floatables | Effluent Gross Value | REPORT Monthly Total | ***** | TONS | ***** | REPORT Monthly Total | ***** | CU YARDS | 1/Month | Measured |
| January thru December | QL | *** | *** | | *** | *** | *** | | | |
| Precipitation | Effluent Gross Value | ***** | ***** | ***** | ***** | REPORT Monthly Total | ***** | # INCHES | 1/Month | Measured |
| January thru December | QL | *** | *** | | *** | *** | *** | | | |
| Duration Of Discharge | Effluent Gross Value | ***** | ***** | ***** | ***** | REPORT Monthly Total | ***** | # OF DAYS | 1/Month | Measured |
| January thru December | QL | *** | *** | | *** | *** | *** | | | |

# Combined Sewer Overflow (CSO) Permit

## A. NOTES

1. **The permit conditions in the CSO section apply only to the combined sewer system and related discharges.**

## B. DEFINITIONS

1. **These definitions are specific only to the CSO section of this permit.**

   a. "Dry weather overflow (DWO)" means a combined sewer overflow that cannot be attributed to a precipitation event, including snow melt, within the hydraulically connected system. DWOs can include flows from one or more of the following: domestic sewage, ground water infiltration, commercial and industrial wastewaters, and any other non-precipitation event related flows (e.g., discharge of tidal infiltration and/or any connections downstream of the regulator to the outfall pipe).

   b. "Green Infrastructure" means methods of stormwater management that reduce wet weather/stormwater volume, flow, or changes the characteristics of the flow into combined or separate sanitary or storm sewers, or surface waters, by allowing the stormwater to infiltrate, to be treated by vegetation or by soils; or to be stored for reuse. Green infrastructure includes, but is not limited to, pervious paving, bioretention basins, vegetated swales, and cisterns.

   c. "Hydraulically connected system" means the entire collection system that conveys flows to one Sewage Treatment Plant (STP). On a case-by-case basis, the permittee, in consultation with the Department, may segment a larger hydraulically connected system into a series of smaller inter-connected systems, based upon the specific nature of the sewer system layout, pump stations, gradients, locations of CSOs and other physical features which support such a sub area. A hydraulically connected system could include multiple municipalities, comprised of both combined and separate sewers.

## C. NINE MINIMUM CONTROL REQUIREMENTS

1. **Proper operation and regular maintenance programs for the sewer system and the CSOs.**
2. **Maximum use of the collection system for storage.**
3. **Review and modification of pretreatment requirements to assure CSO impacts are minimized.**
4. **Maximization of flow to the POTW for treatment.**
5. **Prohibition of CSOs during dry weather.**
6. **Control of solid and floatable materials in CSOs.**
7. **Pollution prevention.**
8. **Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts.**

9. **Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.**

10. **The Nine Minimum Control requirements from the National CSO Policy listed above can be found at N.J.A.C. 7:14A-11.12-Appendix C and http://cfpub.epa.gov/npdes/cso/ninecontrols.cfm?program_id=5.**

## D. NINE ELEMENTS OF THE LONG TERM CONTROL PLAN

1. **Characterization, Monitoring, and Modeling of the Combined Sewer Systems.**

2. **Public Participation.**

3. **Consideration of Sensitive Areas.**

4. **Evaluation of Alternatives.**

5. **Cost/Performance Consideration.**

6. **Operational Plan.**

7. **Maximizing Treatment at the Existing POTW Treatment Plant.**

8. **Implementation Schedule.**

9. **Post-Construction Compliance Monitoring Program.**

10. **The Nine elements of a Long Term Control Plan from the National CSO Policy listed above can be found at N.J.A.C. 7:14A-11.12-Appendix C and http://cfpub.epa.gov/npdes/cso/ltplan.cfm.**

# SPECIFIC REQUIREMENTS: NARRATIVE

## Combined Sewer Overflow (CSO) Permit

## A. MONITORING REQUIREMENTS

### 1. CSO Monitoring Requirements

a. All monitoring shall be conducted as specified in Part III.

b. All monitoring frequencies expressed in Part III are minimum requirements. Any additional samples taken consistent with the monitoring and reporting requirements contained herein shall be reported on the Monitoring Report Forms.

c. Discharges shall be directly monitored or predicted using a DEP approved up-to-date model.

## B. RECORDKEEPING

### 1. CSO Recordkeeping Requirements

a. The permittee shall retain records of all monitoring information, including 1) all calibration and any other methods of monitoring which may be employed, maintenance records and all original strip chart recordings for continuous monitoring instrumentation (if applicable), 2) copies of all reports required by this NJPDES permit, 3) all data used to complete the application for a NJPDES permit, and 4) monitoring information required by the permit related to the permittee's residual use and/or disposal practices, for a period of at least 5 years, or longer as required by N.J.A.C. 7:14A-20, from the date of the sample, measurement, report, application or record.

b. Records of monitoring information shall include 1) the date, locations, and time of sampling or measurements, 2) the individual(s) who performed the sampling or measurements, 3) the date(s) the analyses were performed, 4) the individual(s) who performed the analyses, 5) the analytical techniques or methods used, and 6) the results of such analyses.

c. The permittee shall retain records to document implementation of the Nine Minimum Controls (NMC) and Long Term Control Plan (LTCP) requirements in Sections F. and G., and shall utilize this information when preparing and submitting progress reports required in Section D. This information shall be made available to the Department upon request.

## C. REPORTING

### 1. CSO Reporting Requirements

a. The permittee shall submit all required monitoring results to the Department on the forms provided to them. The Monitoring Report Forms (MRFs) may be provided to the permittee in either a paper format or in an electronic file format. Unless otherwise noted, all requirements below pertain to both paper and electronic formats.

b. Any MRFs in paper format shall be submitted to the following addresses.

NJDEP
Mail Code - 401-02B
Division of Water Quality - Office of Permit Management
P.O. Box 420
Trenton, New Jersey 08625-0420

Delaware River Basin Commission (DRBC)
P.O. Box 7360
West Trenton, New Jersey 08628

c. Electronic data submissions shall be in accordance with the guidelines and provisions outlined in the Department's Electronic Data Interchange (EDI) agreement with the permittee. Paper copies must be available for on-site inspection by DEP personnel or provided to the DEP upon written request.

d. All MRFs shall be certified by the highest ranking official having day-to-day managerial and operational responsibilities for the discharging facility.

e. The highest ranking official may delegate responsibility to certify the MRFs in his or her absence. Authorizations for other individuals to sign shall be made in accordance with N.J.A.C. 7:14A-4.9(b).

f. Monitoring results shall be submitted in accordance with the current Monitoring Report Form Manual and any updates thereof.

g. If there are no CSO discharges during an entire monitoring period, the permittee must notify the Department when submitting the monitoring results. This is accomplished by placing a check mark in the "No Discharge this monitoring period" box on the paper or electronic version of the monitoring report submittal form.

## D. SUBMITTALS

### 1. General CSO Submittal Requirements

a. The permittee shall respond in writing to deficiencies cited by the department within 30 days of notification, or as otherwise directed by the DEP.

b. All reports submitted to the Department pursuant to the requirements of this permit shall comply with the signatory requirements of N.J.A.C. 7:14A-4.9., and contain the following certification.

i. "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for purposely, knowingly, recklessly, or negligently submitting false information."

c. Since multiple municipalities/permittees own portions of hydraulically connected sewer systems, the permittee shall work cooperatively with all other appropriate municipalities/permittees in the hydraulically connected sewer system to ensure that the NMC & LTCP activities are being developed and implemented consistently. The multiple permittees shall delineate the separate and joint relationships among the CSO/CSS owners/operators and Camden County Municipal Utilities Authority Delaware #1 Water Pollution Control Facility regarding implementation of the NMCs and LTCPs. All entities of the agreement shall notify the other entities of all construction related activities in their collection system on a quarterly basis.

d. The permittee shall address all required submittals to _____@dep.state.nj.us.

**2. Updated Nine Minimum Controls Submittal Requirements**

a. The permittee shall submit GIS mapped data for all CSO regulators and discharge outfalls owned by the permittee: on or before EDP + 120 days. This data shall be submitted in accordance with N.J.A.C. 7:1D-Appendix A, and NJ GIS protocol at http://www.state.nj.us/dep/gis/standard.htm.

b. The permittee shall submit a sewer map depicting the actual locations of the separate and combined sanitary, storm sewers, the CSO regulators and outfalls owned by the permittee: on or before EDP + 120 days. These maps shall identify flow direction and manhole invert elevations.

c. The permittee shall submit proof that the signs were installed for each CSO: on or before EDP + 6 months, in accordance with Section F.8. The proof shall include the items below.

i. Photographs of both sides of sign installation area from the land and water sides.

ii. A chart listing the distance from the shoreline.

iii. The physical street address/location of the sign for each CSO.

**3. Long Term Control Plan (LTCP) Submittal Requirements**

a. The Department encourages a single LTCP to be developed and submitted on behalf of all of the permittees in a hydraulically connected sewer system.

b. In accordance with Section G.9., the permittee shall submit a baseline Compliance Monitoring Program (CMP) work plan: on or before EDP + 6 months.

c. In accordance with Section G.9. and the approved work plan, the permittee shall submit the baseline CMP Report and data: on or before EDP + 2 years.

d. The permittee shall develop a LTCP that will include the Elements contained in Section G. The LTCP shall consist of the following steps and be submitted according to the schedule below.

i. Step 1a – System Characterization Workplan for the LTCP - In accordance with Section G.1., the permittee shall submit a system characterization workplan: on or before EDP + 3 months.

ii. Step 1b - In accordance with G.1., G.2. and G.3., the permittee shall submit the information for the System Characterization, the Public Participation Process, and Consideration of Sensitive Areas of the LTCP: on or before EDP + 12 months.

iii. Step 2 - Development and Evaluation of Alternatives for the LTCP - In accordance with Sections G.2. through G.5. and G.9., the permittee shall submit a Development and Evaluation of Alternatives Report on or before EDP + 24 months.

iv. Step 3 - Selection and Implementation of the LTCP: In accordance with Sections G.2. and G.6. through G.9., the permittee shall submit a Selection and Implementation of Alternatives Report: on or before EDP + 36 months.

v. For coordinated LTCPs between municipalities and the STP of a hydraulically connected system using the presumptive approach, the Department may extend this compliance schedule.

### 4. CSO Progress Report Submittal Requirements

a. The permittee shall submit Progress Reports: on or before March 1 of each year.

b. The Progress Reports shall be prepared in accordance with the following requirements.

i. The Progress Reports shall follow the outline structure of the permit requirements in Sections F. and G.

ii. The Progress Reports shall include a summary of all required information and actions taken by the permittee pursuant to this permit for the previous calendar year.

iii. Each Progress Report must include a verification that the Operation and Maintenance Manual, including the SOPs, Asset Management Plan and Emergency Plan, have been updated in accordance with this permit and amended annually, as necessary.

iv. Each Progress Report shall contain a detailed discussion of the continued implementation of the NMCs and the manner in which all owners/operators of the hydraulically connected collection system participated in the development of the LTCP, including information regarding the development and status of the telephone hotline/website pursuant to Section F.8.

## E. FACILITY MANAGEMENT

### 1. CSO Discharge Requirements

a. The permittee shall discharge at the location(s) specified in PART III of this permit.

b. The permittee shall not discharge foam or cause foaming of the receiving water that 1) forms objectionable deposits on the receiving water, 2) forms floating masses producing a nuisance, or 3) interferes with a designated use of the waterbody.

c. The permittee's discharge shall not produce objectionable color or odor in the receiving stream.

d. The permittees discharges shall not exhibit a visible sheen.

### 2. Delaware River Basin Commission (DRBC)

a. The permittee shall comply with the Delaware River Basin Commission (DRBC) "Water Quality Regulations."

### 3. CSO Discharge Monitoring and Reporting Effective Dates

a. Monitoring Report Form (MRF) Requirements.

i. The monitoring and reporting conditions contained in PART III apply for the full term of this permit action.

## F. NINE MINIMUM CONTROL REQUIREMENTS

### 1. Proper Operation and Regular Maintenance Program Requirements

a. The permittee shall continue to implement and update annually, an Operations & Maintenance (O&M) Program and corresponding Manual, including an Emergency Plan, in accordance with N.J.A.C. 7:14A-6.12, to ensure that the treatment works, including but not limited to collection system, the CSO outfalls, solids/floatables facilities, regulators, and related appurtenances which are owned/operated by the permittee are operated and maintained in a manner that achieves compliance with all terms and conditions of this permit.

b. The permittee shall operate the treatment works using a licensed operator in accordance with N.J.S.A. 58:11-66(a), N.J.A.C. 7:14A-6.12(b) and N.J.A.C. 7:10A.

c. The permittee shall provide adequate operator staffing for the treatment works.

d. The permittee shall ensure that staff are properly trained to perform the operation and maintenance duties required and to follow the Standard Operating Procedures (SOPs) in the O&M Program and corresponding Manual.

e. The permittee shall implement an O&M Program & corresponding Manual that includes, at a minimum the below.

i. A directory of appropriate O&M staff, including their individual responsibilities and contact information.

ii. An accurate characterization of the entire collection system owned/operated by the permittee that conveys flows to the treatment works. This characterization shall contain a chart, organized by CSO outfall, as appropriate, of the capacity, dimensions, age, type of material, and location of:
- CSO outfalls.
- Tide gates.
- Solids/floatables controls.
- Regulators.
- Pump stations.
- Significant Indirect Users (SIUs).
- Areas that have historically experienced the following: blockages, bottlenecks, flow constrictions, sewer back-ups including to basements, streets and other public and private areas, overflows or related incidences.

f. The permittee shall delineate the characterization information required in Section F.1.e., on a GIS map, as applicable, pursuant to N.J.A.C. 7:1D-Appendix A and shall follow the NJ GIS protocol at http://www.state.nj.us/dep/gis/standard.htm.

g. The permittee shall map the entire collection system owned/operated by the permittee that conveys flows to the treatment works, clearly indicating the CSO outfalls and their upstream, associated regulators, on the GIS maps required in Section F.1.f.

h. The permittee shall review its Sewer Use Agreements with its customer municipalities and revise them within 120 days if necessary to require the customer municipalities meet the following requirements under an enforceable schedule:
   - to operate and maintain their treatment works,
   - to identify Infiltration and Inflow (I/I) and reduce where appropriate, and
   - identify and eliminate interconnections and cross-connections in storm sewers.

i. The permittee shall also include Standard Operating Procedures (SOPs) in the O&M Program and corresponding Manual for the operation, scheduled preventative maintenance, and monthly inspections to ensure that the entire collection system that conveys flows to the treatment works will function properly. At a minimum the SOPs shall contain detailed instructions for system operations, such as frequency of inspections, regular maintenance, and the timely repair of the entire collection system that conveys flows to the treatment works. These SOPs shall include the conditions below.

   i. Ensure that the entire collection system owned/operated by the permittee that conveys flows to the treatment works functions at all times in such a way as to not result in sewage overflows including to basements, streets and other public and private areas, or bottlenecks/constrictions that limit flow in specific areas and prevent the downstream STP treatment capacity from being fully utilized, in accordance with Section F.4.

   ii. Ensure that the storage and conveyance of combined sewage to the STP is maximized in accordance with Sections F.2 and F.4.

   iii. Ensure that the discharges from SIUs contributing to the CSOs are minimized to the greatest extent practicable in accordance Section F.3.

   iv. Ensure there will be no dry weather overflows from any CSO in accordance with Section F.5.

   v. Conduct a visual inspection program of sufficient scope and frequency of the CSS to provide reasonable assurance that any DWOs will be discovered.

   vi. Ensure the solids/floatables appurtenances will be maintained and the solids/floatables will be removed from the CSO discharge and disposed of properly at such frequency so as not to cause obstructions of flow for any future CSO discharges, in accordance with Part II of this permit and Section F.6.

   vii. Prevent the intrusion of receiving waters due to high tides and/or receiving water flooding into the entire collection system owned/operated by the permittee that conveys flows to the treatment works in accordance with N.J.A.C. 7:14A-23.14(d)5.

   viii. Remove within one (1) week of the permittee becoming aware, any obstructions due to debris, fats, oils and greases, and sediment buildup, or other foreign materials in the collection system owned/operated by the permittee.

ix. Require immediate action(s) to repair damage and/or structural deterioration of the entire collection system owned/operated by the permittee that conveys flows to the treatment works.

x. Provide for ongoing infiltration and inflow (I/I) reduction strategies through the identification of I/I sources and the prioritization and implementation of I/I reduction projects.

j. The permittee shall incorporate an Asset Management Plan as part of the overall O&M strategy. This plan shall include infrastructure inventory with critical infrastructure repair/replacement needs identified, that ensures the collection system owned/operated by the permittee that conveys flows to the treatment works is perpetually and proactively managed with the appropriate resources (capital, staffing, training, supplies, equipment) allocated in the permittee's budget as prepared and submitted to Department of Community Affairs.

k. The permittee shall also include in the O&M Program and corresponding Manual, an Emergency Plan, in accordance with N.J.A.C. 7:14A-6.12(d). The Emergency Plan shall provide for, to the maximum extent possible, uninterrupted treatment works operation during emergency conditions. The Emergency Plan shall include Standard Operating Procedures (SOPs) which ensure the effective operation of the treatment works under emergency conditions, such as extreme weather events (including 100 and 500 year storm events) and extended periods of no power, (e.g., 7 days and 14 days).

l. The permittee shall amend the O&M Program & Manual no less frequent than annually to reflect updated information and changes in the characterization, design, construction, operations, maintenance, Emergency Plan, and SOPs as listed in Section F.1. and include verification that the O&M Program and corresponding Manual has been prepared and updated in accordance with the requirements in Section D.

**2. Maximum use of the collection system for storage**

a. The permittee shall use the entire collection system owned/operated by the permittee for in-line storage of sewage for future conveyance to the STP when sewer system flows subside by ensuring that the sewage is retained in the sewer system to the extent possible to minimize CSO discharges (volume, frequency and duration), while not creating or increasing sewage overflows, including to basements, streets and other public and private areas.

b. The permittee shall minimize the introduction of sediment and obstructions in the entire collection system owned/operated by the permittee that conveys flows to the treatment works pursuant to Sections F.1. and F.7.

c. The permittee shall operate and maintain the entire collection system owned/operated by the permittee that conveys flows to the treatment works pursuant to Section F.1.

d. The permittee shall identify and implement minor modifications, based on the ongoing evaluations from the characterization required under Section F.1. to enable the entire collection system that owned/operated by the permittee conveys flows to the treatment works to store additional wet weather flows to reduce any sewage flooding until downstream sewers and treatment facilities can adequately convey and treat the flows.

**3. Review and modification of pretreatment requirements to assure CSO impacts are minimized**

a. The permittee shall determine the locations, associated CSO outfalls and discharge nature of the Significant Indirect Users (SIUs); determine and prioritize the environmental impact of these SIUs by CSO outfall; include this information in the characterization portion of the O&M Program and corresponding Manual as required in Section F.1. This information shall be updated annually in the Progress Report in accordance with Section D.4.

b. The permittee shall require that SIUs investigate ways to minimize their dischargers during wet weather and report their finding to the permittee.

c. When and where necessary, the permittee shall establish agreements with SIUs or ordinances specifying that the SIUs (especially for batch discharges, non-continuous dischargers) should restrict discharges to the greatest extent practicable during wet weather periods.

**4. Maximization of flow to the POTW for treatment**

a. The permittee shall operate and maintain the entire collection system owned/operated by the permittee that conveys flows to the treatment works and STP to maximize the conveyance of wastewater to the STP for treatment.

**5. Prohibition of CSOs during dry weather**

a. Dry weather overflows (DWOs) are prohibited.

b. All DWOs must be reported to the Department as incidents of non-compliance in accordance with the requirements at N.J.A.C. 7:14A-6.10(c) and (e), along with a description of the corrective actions taken.

c. The permittee shall inspect the combined sewer system as required under Section F.1. to ensure there are no DWOs.

d. The permittee shall prohibit any connections, including but not limited to construction dewatering, remediation activities or similar activities, downstream of a CSO regulator, that will convey flow to the CSO during dry weather. On a case-by-case basis, the Department reserves the right to allow temporary use of the CSO outfall structures for other types of discharges to address extraordinary circumstances. Any use under this provision must be specifically approved by the Department.

**6. Control of solids/floatables in CSOs**

a. The permittee shall continue to implement measures to capture and remove Solids/Floatables which cannot pass through a bar screen having a bar spacing of 0.5 inches from all CSOs.

b. Treatment, including mechanical measures used for particle size reduction of Solids/Floatables in the wastewater collection system prior to discharge to the waters of the state to achieve compliance with paragraph F.6.a. is not permitted.

c. The captured debris shall be removed from each Solids/Floatables control system as necessary to ensure that there will be no flow restrictions during the next CSO discharge event.

d. All captured debris removed from the Solids/Floatables control system must be disposed of properly at a permitted solid waste facility authorized to accept grit and screening materials from wastewater treatment facilities in accordance with N.J.A.C. 7:14A and Part II of this permit.

**7. Pollution Prevention**

a. The permittee shall continue to implement and upgrade pollution prevention measures necessary to prevent and limit contaminants from entering the entire collection system owned/operated by the permittee that conveys flows to the treatment works. Unless demonstrated to the Department to be impracticable measures shall include, but are not limited to, the following below.

i. Street cleaning.

ii. Retrofitting of stormwater inlets.

iii. Commercial/industrial pollution prevention rules, ordinances etc. as per Section F.3.

iv. Solid waste collection, and recycling.

v. Public education programs.

vi. Enforcement of illegal dumping regulations.

vii. Applicable sewer use agreements shall be reviewed and modified if necessary to address the reduction of inflow and infiltration into the collection system where feasible.

**8. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts.**

a. The permittee shall post CSO Identification Signs at every CSO outfall location identified in Part III of this permit. The signs shall conform to the following specifications, unless an alternative design has been approved by the Department.

i. Signs shall be installed in such a manner as to have the same information visible from both the land and from the water.

ii. Signs shall be at least 18" x 24" and printed with reflective material.

iii. Signs shall be in compliance with applicable local ordinances.

iv. The signs shall depict the following information below.
- Warning, possible sewage overflows during and following wet weather. Contact with water may also cause illness.
- Report dry weather discharge to NJDEP Hotline at 1 (877) 927-6337 (WARN-DEP).
- Report foul odors or unusual discoloration to NJDEP Hotline or (Camden County MUA) at (phone no._____).
- NJPDES Permit No. NJ0026812.
- Discharge Serial No. _____.
- www.state.nj.us/dep/dwq/cso.htm.
- International Standards Organization symbols prohibiting swimming, fishing, and kayaking.

b. The permittee shall submit to DEP the required proof the signs were installed in accordance with Section D.

c. The permittee shall continue to employ measures to provide reasonable assurance that the affected public is informed of CSO discharges in a timely manner. These measures shall include, but are not limited to the below.

i. Posting leaflets/flyers/signs with general information at affected use areas such as beaches, marinas, docks, fishing piers, boat ramps, parks and other public places (within 100 feet of outfall) to inform the public what CSOs are, the locations of the CSO outfall and the frequency and nature of the discharges and precautions that should be undertaken for public health/safety and web sites where additional CSO/CSS information can be found.

ii. Notification to all residents, either US Postal Service or email, (with copies sent to the NJDEP at the address in C.1.b. or by email in D.1.d.) in the permittee's municipality and any other municipality with sewer service from the permittee that contribute to your CSO providing additional information as to what efforts the permittee has made and plans to continue to undertake to reduce/eliminate the CSOs and related threat to public health. Updated notifications shall be mailed on an annual basis.

iii. On or before EDP + 12 months, the permittee shall create and maintain a telephone hot line or website (using the same platform as NJDEP) for interested citizen inquiries to provide immediate/up-to-date information regarding where CSO discharges may be occurring, or that no discharges are occurring.

**9. Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls**

a. The permittee shall monitor the CSO discharge events and record the date, time, duration, rainfall and quantity of solids/floatables removed for each discharge event from each CSO through appropriate modeling or by an appropriately placed flow meter/totaling device, level sensor, or other appropriate measuring device, and report the required information on the DMR as required by Part III of this permit.

## G. LONG TERM CONTROL PLAN REQUIREMENTS

**1. Characterization Monitoring and Modeling of the Combined Sewer System**

a. The permittee, in coordination with the hydraulically connected municipalities, shall submit an updated characterization study that will result in a comprehensive characterization of the CSS developed through records review, monitoring, modeling and other means as appropriate to establish the existing baseline conditions, evaluate the efficacy of the CSO technology based controls, and determine the baseline conditions upon which the LTCP will be based. The characterization shall include a thorough review of the entire collection system that conveys flows to the treatment works, including areas of sewage overflows, including to basements, streets and other public and private areas, to adequately address the response of the CSS to various precipitation events; identify the number, location, frequency and characteristics of CSOs; and identify water quality impacts that result from CSOs.

b. The permittee may use previous studies to the extent that they are accurate and representative of the current required information, such as:

i. CSO Modeling Study, Sewage Infrastructure Improvement Act Planning Study, Project No. CSO-91-018, prepared by CH2MHILL, dated July 1999;

ii. Monitoring Program Proposal and Work Plan, Sewage Infrastructure Improvement Act Planning Study, Project No. CSO-91-018, prepared by CH2MHILL, dated October 1999;
iii. CSO Monitoring Study, Appendices A to H, Sewage Infrastructure Improvement Act Planning Study, Project No. CSO-91-018, prepared by CH2MHILL, dated November 1999;
iv. Sewer System Inventory and Assessment Analysis, Sewage Infrastructure Improvement Act Planning Study, Project No. CSO-91-018, prepared by CH2MHILL, dated November 1999;
v. Sewage Infrastructure Improvement Act Planning Study, Final Report, Project No. CSO-91-018, prepared by CH2MHILL, dated May 2001;
vi. Wet Weather Discharge Minimization Study, prepared by Hazen and Sawyer Environmental Engineers & Scientists, dated April 1, 2007; and
vii. City of Camden Storm Water Flooding Assessment, prepared by CMX, dated April 20, 2009.

c. The major elements of the sewer system characterization are noted below.

i. Rainfall Records--The permittee shall examine the rainfall record as per Section F.9. for the geographic area of its existing CSS using sound statistical procedures and best available data. The permittee shall evaluate flow variations in the receiving water body to correlate between CSOs and receiving water conditions.

ii. Combined Sewer System Characterization—the permittee shall evaluate sewer system records, field inspections gathered from the O&M Characterization required under Section F.1. (and other previous relevant studies), and other activities necessary to understand the number, location and frequency of overflows and their location relative to sensitive areas and to pollution sources in the collection system, such as SIUs.

iii. CSO Monitoring - Using the information gathered from Section F.9., the permittee shall develop and/or update a previously existing, comprehensive, representative monitoring program that measures the frequency, duration, flow rate, volume and pollutant concentration of CSO discharges and assesses the impact of the CSOs on the receiving waters. The monitoring data summary may utilize existing data from previous studies, and must include necessary CSO effluent and ambient in-stream monitoring for pathogens (current and recreational standards for bacteriological indicators (e.g., fecal coliform, Enterococcus and E. Coli)). A representative sample of overflow points can be selected that is sufficient to allow characterization of CSO discharges, their water quality impacts and to facilitate evaluation of control plan alternatives.

iv. Modeling – the permittee may employ NJDEP or EPA approved models, which include appropriate calibration and verification with field measurements, to aid in the characterization. If models are used they shall be identified by the permittee along with an explanation of why the model was selected and used in the characterization. The permittee should base its choice of a model on the characteristics of the entire collection system that conveys flows to the treatment works (including flows from other hydraulically connected municipal sewer systems), the number and location of overflow points, and the sensitivity of the receiving water body to the CSO discharges. The sophistication of the model should relate to the complexity of the system to be modeled and to the information needs associated with evaluation of CSO control options and water quality impacts. Because of the iterative nature of modeling sewer systems, CSOs, and their impacts, monitoring and modeling efforts are complementary and should be coordinated with other affected entities.

v. The permittee shall identify sensitive areas where CSOs occur. These areas include designated Outstanding National Resource Waters, National Marine Sanctuaries, waters with threatened or

endangered species and their habitat, waters with primary contact recreation, bathing beaches, public drinking water intakes or their designated protection areas, and shellfish beds.

**2. Public Participation Process**

a. The permittee shall recertify/update the previously submitted Sewage Infrastructure Improvement Act Planning Study, Final Report, Project No. CSO-91-018, prepared by CH2MHILL, dated May 2001. Implementation shall actively involve the affected public throughout each of the 3 Steps of the LTCP process. The affected public includes rate payers (including rate payers in the separate sewer sections), industrial users of the sewer system, persons who reside downstream from the CSOs, persons who use and enjoy the downstream waters, and any other interested persons.

b. The permittee shall invite members of the affected/interested public to establish a supplemental CSO Team to the permittee's team from Section F.1.

**3. Consideration of Sensitive Areas**

a. The permittee's LTCP shall give the highest priority to controlling overflows to sensitive areas. Sensitive areas include designated Outstanding National Resource Waters, National Marine Sanctuaries, waters with threatened or endangered species and their habitat, waters with primary contact recreation, bathing beaches, public drinking water intakes or their designated protection areas, and shellfish beds.

b. The long-term CSO control plan shall comply with the following requirements.

i. Prohibit new or significantly increased CSO overflows.

ii. Eliminate or relocate CSO overflows that discharge to sensitive areas wherever physically possible and economically achievable, except where elimination or relocation would provide less environmental protection than additional treatment.

iii. Where elimination or relocation is not physically possible and economically achievable, or would provide less environmental protection than additional treatment, provide the level of treatment for remaining CSO overflows deemed necessary to meet WQS for full protection of existing and designated uses.

**4. Evaluation of Alternatives**

a. The permittee shall evaluate a range of CSO control alternatives that will provide for attainment of water quality standards using either the Presumption Approach or the Demonstration Approach (as defined in Section G.4.f. and G.4.g.).

b. The permittee shall submit, as per Section D.3.d.iii., the Evaluation of Alternatives Report that will enable the permittee, in consultation with the Department, the public, owners and/or operators of the entire collection system that conveys flows to the treatment works, to select the alternatives to ensure the CSO controls will meet CWA requirements, ensure CSO discharges do not cause exceedances of any water quality criteria, will be protective of the existing and designated uses in accordance with N.J.A.C. 7:9B, give the highest priority to controlling CSOs to sensitive areas and address minimizing impacts from SIU discharges.

c. The permittee shall select either Demonstrative or Presumptive Approach for each group of hydraulically connected CSOs, and identify each CSO group and its individual discharge locations.

d. The Evaluation of Alternatives Report shall include a list of control alternative(s) evaluated for each CSO.

e. The permittee shall evaluate a range of CSO control alternatives predicted to accomplish the requirements of the CWA. In its evaluation of each potential CSO control alternative, the permittee shall use an NJDEP approved hydrologic and hydraulic model. The permittee shall utilize the model to simulate the existing conditions and conditions as they are expected to exist after construction and operation of the chosen alternative(s). The permittee shall evaluate the practical and technical feasibility of the proposed CSO control alternative, and water quality benefits of constructing and implementing various remedial controls and combination of such controls and activities which shall include, but not be limited to the below.

   i. Green infrastructure (which allows for greater removal of load/flow).

   ii. Increased storage capacity in the collection system.

   iii. POTW expansion and/or storage at the plant (based on information provided by the POTW as per Section D.4., an evaluation of the capacity of the unit processes must be conducted at the POTW resulting in a determination of whether there is any additional treatment capacity available at the POTW). Based upon this information, the permittee shall determine (modeling may be used) the amount of CSO discharge reduction that would be achieved by utilizing this additional treatment capacity while maintaining compliance with all permit limits.

   iv. Infiltration and Inflow reduction in the entire collection system that conveys flows to the treatment works to free up storage capacity or conveyance in the sewer system and/or treatment capacity at the STP, and feasibility of implementing in the entire system or portions thereof.

   v. Sewer separation.

   vi. CSO discharge treatment.

f. The "Presumption" Approach, in accordance with N.J.A.C 7:14A-11 Appendix C provides the below.

   A program that meets any of the criteria listed below will be presumed to provide an adequate level of control to meet the water quality-based requirements of the CWA, provided the Department determines that such presumption is reasonable in light of the data and analysis conducted in the characterization, monitoring, and modeling of the system and the consideration of sensitive areas described above.

   i. No more than an average of four overflow event (see below) per year from a hydraulically connected system as the result of a precipitation event that does not receive the minimum treatment specified below. These four overflow events shall be calculated over a 60 month rolling average, provided that the Department may allow up to two additional overflow events per year. For the purpose of this criterion, an 'event' is:

- In a hydraulically connected system that contains only one CSO outfall, multiple periods of overflow are considered one overflow event if the time between periods of overflow is no more than 24 hours.
- In a hydraulically connected system that contains more than one CSO outfall, multiple periods of overflow from one or more outfalls are considered one overflow event if the time between periods of overflow is no more than 24 hours without a discharge from any outfall.

ii. The elimination or the capture for treatment of no less than 85% by volume of the combined sewage collected in the CSS during precipitation events on a system-wide annual average basis.

iii. The elimination or removal of no less than the mass of the pollutants, identified as causing water quality impairment through the sewer system characterization, monitoring, and modeling effort, for the volumes that would be eliminated or captured for treatment under Section G.4.f.ii. Combined sewer overflow remaining after implementation of the NMCs and within the criteria specified at Section G.4.f.i. or G.4.f.ii. shall receive minimum treatment in accordance with the below:

- Primary clarification (Removal of floatables and settleable solids may be achieved by any combination of treatment technologies or methods that are shown to be equivalent to primary clarification.).

- Solids and floatables disposal.

- Disinfection of effluent, if necessary, to meet WQS, protect designated uses and protect human health, including removal of harmful disinfection chemical residuals, where necessary.

g. The "Demonstration" Approach, in accordance with N.J.A.C. 7:14A-11 Appendix C provides the below.

A permittee may demonstrate that a selected control program, though not meeting the criteria specified under the Presumption Approach above, is adequate to meet the water quality-based requirements of the CWA.

The permittee must demonstrate each of the following below.

i. The planned control program is adequate to meet WQS and protect designated uses, unless WQS or uses cannot be met as a result of natural background conditions or pollution sources other than CSOs.

i. The CSO discharges remaining after implementation of the planned control program will not preclude the attainment of WQS or the receiving waters' designated uses or contribute to their impairment.

iii. The planned control program will provide the maximum pollution reduction benefits reasonably attainable.

iv. The planned control program is designed to allow cost effective expansion or cost effective retrofitting if additional controls are subsequently determined to be necessary to meet WQS or designated uses.

**5. Cost Performance Considerations**

a. The permittee shall submit in accordance with the submittal requirements at Section D.3.d.iii. above, the cost/performance considerations that demonstrate the relationships among proposed control alternatives that correspond to those required in accordance with G.4. above. This shall include an analysis to determine where the increment of pollution reduction achieved in the receiving water diminishes compared to the increased costs. For the demonstration approach, the number of events considered shall include 0, 4, 7, 10 and 20. This analysis, often known as "knee of the curve", shall be among the considerations used to help guide selection of controls.

In accordance with Section G.1.a., the permittee can use previous studies to the extent that they are accurate and representative of the current required information, such as: Wet Weather Discharge Minimization Study, prepared by Hazen and Sawyer Environmental Engineers & Scientists, dated April 1, 2007 and Baldwins Run (C32) CSO Outfall Disinfection Feasibility Study, prepared by Hazen and Sawyer Environmental Engineers & Scientists, dated January 29, 2010.

**6. Operational Plan**

a. Upon Department approval of the final LTCP and throughout implementation of the approved LTCP as appropriate, the permittee shall modify the O&M Program and Manual to address the final LTCP CSO control facilities and operating strategies, including but not limited to, maintaining Green Infrastructure, staffing and budgeting, inflow/infiltration, and emergency plans.

**7. Maximizing Treatment at the Existing POTW**

a. The LTCP shall include the maximization of the removal of pollutants during and after each precipitation event at the POTW, ensuring that such flows receive treatment to the greatest extent practicable utilizing existing tankage for storage, while still meeting all permit limits.

**8. Implementation Schedule**

a. The permittee shall submit a construction and financing schedule for implementation of NJDEP approved CSO controls. Such schedules may be phased based on the relative importance of the adverse impacts upon water quality standards, the permittee's financial capability, and other water quality related infrastructure improvements, including those related to stormwater.

b. In accordance with Section D.3.d.iv., the permittee shall submit an implementation schedule, including yearly milestones, which considers the below.

i. Adequately addressing areas of sewage overflows, including to basements, streets and other public and private areas.

ii. CSO overflows that discharge to sensitive areas as the highest priority.

iii. Use impairment of the receiving water.

iv. The permittee's financial capability including consideration of such factors as below.
- Median household income.
- Total annual wastewater and CSO control costs per household as a percent of median household income.

- Overall net debt as a percent of full market property value.
- Property tax revenues as a percent of full market property value.
- Property tax collection rate.
- Unemployment.
- Bond rating.

v. Grant and loan availability.

vi. Previous and current residential, commercial and industrial sewer user fees and rate structures.

vii. Other viable funding mechanisms and sources of financing.

viii. Resources necessary to design, construct and/or implement other water related infrastructure improvements as part of an overall asset management plan.

**9. Compliance Monitoring Program (CMP)**

The monitoring information collected from this phase of the CMP will be compared to subsequent CMP events during and after LTCP implementation to evaluate the effectiveness of implemented CSO controls.

a. The permittee shall implement a CMP, adequate to verify baseline and existing conditions, the effectiveness of CSO controls, compliance with water quality standards, and protection of designated uses. This CMP shall be conducted before, during and after implementation of the LTCP and shall include a work plan to be approved by the Department that details the monitoring protocols to be followed, including the following necessary monitoring below.

i. Discharge frequency for each CSO (days/hours per month),

ii. Duration of each discharge (event) for each CSO (start and stop times for each calendar day).

iii. Quality of the flow discharged from each CSO, which shall include pathogen monitoring at a minimum.

iv. Rainfall monitoring in the vicinity of each CSO/municipality.

The permittee can use previous studies to the extent that they are accurate and representative of the current required information, such as: Monitoring Program Proposal and Work Plan, Sewage Infrastructure Improvement Act Planning Study, Project No. CSO-91-018, prepared by CH2MHILL, dated October 1999 and CSO Monitoring Study, Appendices A to H, Sewage Infrastructure Improvement Act Planning Study, Project No. CSO-91-018, prepared by CH2MHILL, dated November 1999.

b. For the Demonstration Approach, the above monitoring must be ongoing every year upon LTCP approval to document trends in water quality due to CSO discharges. The results must be submitted in the Progress Reports required in Section D.4.

c. For the Presumption Approach, the above monitoring may be reduced during construction/implementation of the CSO controls.

CCMUA

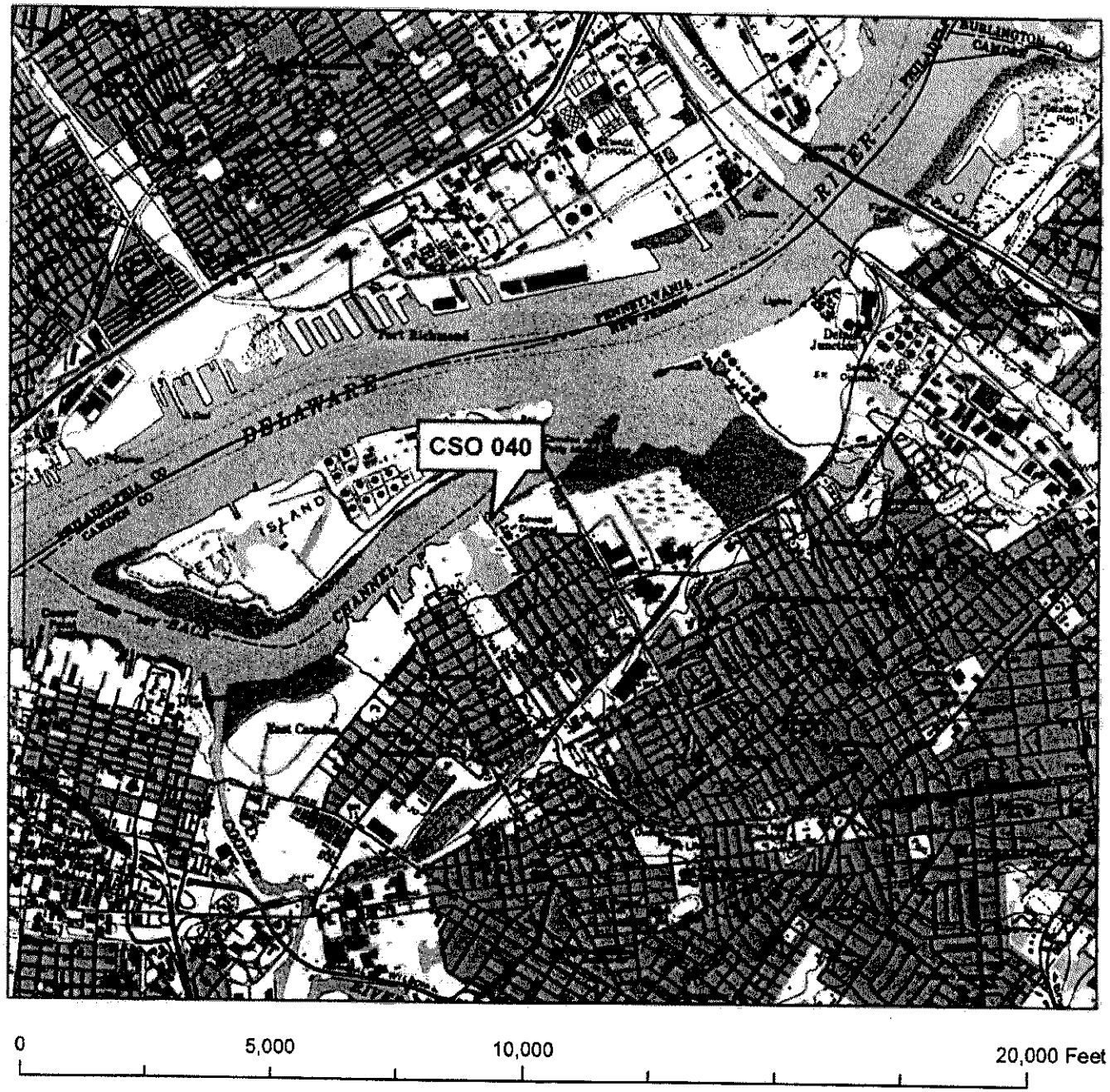
## Outfall Designator: 040A

| General Information | | Watershed Information | |
|---|---|---|---|
| Receiving Water: | Delaware River | Downstream Confluences: | |
| Via : | Outfall pipe | Receiving River Basin: | Delaware River |
| Classification (a): | Mainstem Delaware-Zone 3 | WMA (b): | Lower Delaware Tributaries (Camden) |
| County: | Camden | Watershed: | Cooper River |
| Municipality: | Camden City | Subwatershed: | Cooper River (below Rt 130) |
| | | HUC 14 (c): | 02040202110060 |
| | | Water Quality Impairments (d): | Trichloroethylene, Tetrachloroethylene, pH, Polychlorinated biphenyls, DDE, Arsenic, DDT |

**Outfall Description**

Outfall Configuration: tidally submerged pipe

| Outfall Number | Outfall Name | Latitude N | Longitude W |
|---|---|---|---|
| 040A | 32nd & Farragut Street | 39°57'54" | 75°05'28" |




**CSO of**

**Camden County MUA**

**USGS Topo Map**